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(b) Directive transmitting antennas shall be used whenever feasible so as to minimize interference to other licensees. The radiation pattern shall be designed to minimize radiation in directions where no reception is intended. When an ITFS station is used for point-to-point service, an appropriate directional antenna must be used.

(c) The use of elevated receiving antennas is preferable to the use of elevated transmitting antennas or greater power to provide the desired service.

(d) The use of vertical or horizontal plane polarization or right-hand or left-hand rotating (circular) polarization may be used to minimize the hazard of harmful interference between systems. The Commission reserves the right to specify the polarization to be used.

(e) The power gain compared to an isotropic antenna and the directive properties of the transmitting and receiving antennas proposed to be employed, as well as the geometric distribution of the transmitting and receiving points, shall be supplied with each application for a new ITFS fixed station or for changes in the antenna facilities of an existing station.

[28 FR 13731, Dec. 14, 1963, as amended at 48 FR 9012, Mar. 3, 1983; 49 FR 32596, Aug. 15, 1984; 50 FR 26761, June 28, 1985; 52 FR 3806, Feb. 6, 1987; 58 FR 44951, Aug. 25, 1993]

§ 74.938 Transmission standards.

The width of an ITFS channel is 6 MHz. ITFS transmitters must be type accepted by the Commission for the particular visual and aural signals that will be employed in actual operation. Either the manufacturer or the licensee must obtain transmitter type acceptance for the transmitter by filing a application for type acceptance with appropriate information concerning the signal waveforms and measurements.

[28 FR 13731, Dec. 14, 1963, as amended at 49 FR 32596, Aug. 15, 1984; 55 FR 46014, Oct. 31, 1990]

§ 74.939 Special rules governing ITFS response stations.

(a) An ITFS response station is authorized to provide communication by voice and/or data signals with its associated instructional television fixed station for use in instructional or computer-assisted communications. Other communications concerning the technical operation of the system may be carried on when necessary.

(b) An ITFS response station may be operated only by the licensee of an instructional television fixed station and only at an authorized receiving location of the instructional television fixed station with which it communicates. More than one ITFS response station may be operated at the same or different locations by the same licensee. An application for authority to operate a new or modified response station shall be filed with the Commission in Washington, DC, on FCC Form 330. Section VI of that form shall supply the following information for each response station:

(1) The name of the school or other description of the building in which the ITFS response station will be located, the address, and the geographic coordinates of the ITFS response station transmitting antenna.

(2) The manufacturer's name, type number, operating frequency, and power output of the proposed ITFS response station transmitter.

(3) The type of transmitting antenna, power gain, and azimuthal orientation of the major lobe of radiation in degrees measured clockwise from True North.

(4) A sketch giving pertinent details of the ITFS response station transmitting antenna installation including ground elevation of the transmitter site above mean sea level; overall height above ground, including appurtenances, of any ground-mounted tower or mast on which the transmitting antenna will be mounted or, if the tower or mast is or will be located on an existing building or other manmade structure, the separate heights above ground of the building and the tower or mast including appurtenances; the location of the tower or mast on the building; the location of the transmitting antenna on the tower or mast; and the overall height of the transmitting antenna above ground. This can be combined with the sketch for the receiving location if the transmitting antenna is clearly shown.